

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 January 2004 (15.01.2004)

PCT

(10) International Publication Number
WO 2004/005534 A2

(51) International Patent Classification⁷: **C12Q**

(21) International Application Number:
PCT/US2003/022259

(22) International Filing Date: 8 July 2003 (08.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/394,443 8 July 2002 (08.07.2002) US

(71) Applicant (for all designated States except US): DUKE
UNIVERSITY [US/US]; 2020 West Main Street, Suite 10,
Durham, NC 27705 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PERI-
CAK-VANCE, Margaret, A. [US/US]; 304 Silver

Creek Trail, Chapel Hill, NC 27514 (US). VANCE,
Jeffrey, M. [US/US]; 304 Silver Creek Trail, Chapel Hill,
NC 27514 (US). HAINES, Jonathan, L. [US/US]; 1609
Knox Drive, Brentwood, TN 37027 (US).

(74) Agent: ABRAMSON, Jarrett, K.; Myers Bigel Sibley &
Sajovec, P.A., P.O. Box 37428, Raleigh, NC 27627 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: SCREENING FOR ALZHEIMER'S DISEASE

| LRP1 SNPS on CH 12 | NUMBER OF MARKERS | IN TOTAL GENE | 2-marker haplo | 3-marker haplo |
|-----------------------|----------------------|---------------------|----------------|----------------|
| 425 intron 18 | 1 | 0.99 tr 0.43 ptt | | |
| 438 intron 33 | 1 | 0.78 tr 0.12 ptt | 0.01 tr* | 0.0000 tr*** |
| 458 intron 44 | 2 | 0.97 tr 0.41 ptt | 0.0001 tr*** | 0.0001 tr*** |
| 452 exon 58 | 2 | 0.68 tr 0.32 ptt | 0.02 tr** | 0.0000 tr*** |
| 441 intron 57 | 2 | 0.78 tr 0.22 ptt | 0.01 tr* | 0.02 tr* |
| 477-1 intron 65 | 2 | 0.80 tr 0.20 ptt | 0.80 tr | 0.07 tr* |
| 477-2 intron 65 | 2 | 0.68 tr 0.32 ptt | 0.80 tr | 0.005 tr** |
| 457 intron 78 | 1 | 0.48 tr 0.52 ptt | 0.04 tr** | |

(57) Abstract: The present invention discloses methods of screening a subject for Alzheimer's disease comprising detecting the presence or absence of a marker or functional polymorphism associated with a gene linked to Alzheimer's disease.

WO 2004/005534 A2